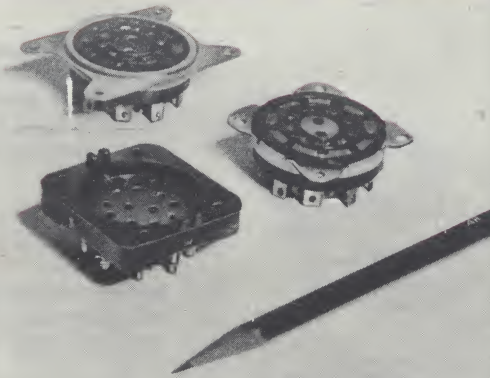


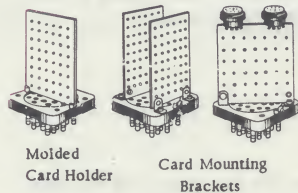
ALDEN "20" NON-INTERCHANGEABLE BASE & SOCKETS

100Q/400-20 SERIES

Here is the plug-in base and sockets of tremendous flexibility, specially designed for plug-in unit construction. . . . Solves many unitizing problems. The base can be standard for making your relays, circuit elements and special components compact plug-in units. . . . quickly, easily and at low cost. Special design of the base eliminates difficulties encountered in the use of conventional octal types. There's no molded center boss to break. Pins are strong and stubby - do not bend and break out. Alden Non-Interchangeable pin layout easily orients base and socket. By selecting variations of pin layout of less than 20 pins, danger of mismating and burned out units can be eliminated and critical voltages or signals isolated.

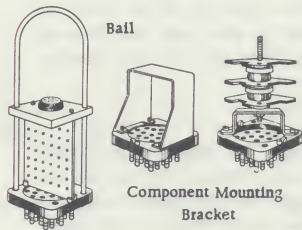


CONSTRUCTION FEATURES



Molded Card Holder

Card Mounting Brackets



Ball

Component Mounting Bracket



Rack Mounting Sockets

Chassis Mounting Socket

The scope of the Alden base as a mounting medium is almost unlimited. . . . cards, brackets and bails can be quickly and easily attached using standard assembly tools. When the base is to be used for electronic plug-in units, the Alden Terminal Card Mounting System for holding components and miniature tube sockets, mounts using either the molded card boss or metal brackets.

Special metal brackets for mounting relays or special units can be easily and solidly attached. Handles and supporting bails can be slipped into corner holes and securely fastened from below.

Two types of sockets provide extreme flexibility. For conventional chassis mounting the Alden 400-20 chassis mounting socket takes a minimum of space. It eyelets or rivets to chassis and the mounting area is all within the housing dimensions. Where many close grouped units are to be used, the most economical and efficient method is through the use of the Alden 400LG-20 rack mounting socket. These sockets mount on U-Channels side-by-side or in series with overlapping ears.

ALDEN PRODUCTS COMPANY

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PI

DESIGN FEATURES

Non-Interchangeable - 11 to 20 pins can be used, pattern can be varied to allow isolation of critical voltages and frequencies or to make unit non-interchangeable with any unit having same number of pins. . . . Unit then mates only with correct socket thereby absolutely prevents mismating and the danger of burned out units.

Rugged - The difficulty in using conventional bases for plug-in unit construction has been that pins would bend and molded boss had tendency to break. This shortened life of plug-in unit considerably. However, these headaches are avoided in the Alden Non-Interchangeable Base by using short, stubby pins and elimination of the molded center boss entirely.

Variable Retention Force - Click action of pins and clips allows you to select retention force of base over a wide range. By varying the number of locking contacts in the socket, hold can be solid to withstand heavy vibration and shock without shaking loose, or retention can be only slight for easy removal if necessary.

Easy Locating - Slight projection of pins centers plug-in unit quickly for locating. . . . locating rings and alignment indicator guide pins for quick rotation to insertion position. Color coding of rings available for fast identification and matching of units.

Variable Pin Pattern
Insures Only Correct
Unit Mates In Socket

Strong
Stubby
Pins

Click
Action
Annular Rings

Locating
Rings

Color
Code

Alignment
Indicator

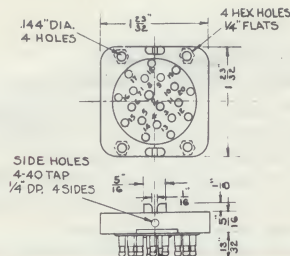
APPLICATIONS

The Alden "20" Non-Interchangeable Base and Sockets are the heart for this series of shielded plug-in electronic sub-assemblies. Using the Alden Terminal Card Mounting System to give ease of layout and wiring assembly--flip-flop, gating, oscillator circuits, etc. become compact plug-in units.

This open unit, designed using the Alden "20" Non-Interchangeable base, sockets and the Alden Terminal Card Mounting System, has the same flexibility as the shielded. . . . with the additional features of being open for rapid heat dissipation and having handle for easy plug-in and removal where many are used in small areas.

By using the Alden "20" Non-Interchangeable Base, coupled with simple brackets and standard housings, many additional components conveniently become plug-in units. Relays, filters, stepping switches, and condensers are given protection against dust and rough handling while at the same time making them economical plug-in units.

SPECIFICATIONS



ALDEN "20" NON-INTERCHANGEABLE BASE

100Q-20 SERIES

The rugged base that can become standard for many of your plug-in unit designs.

MATERIAL: Molded of general purpose phenolic. (Black mica filled phenolic (NA-AX100) available as specified).

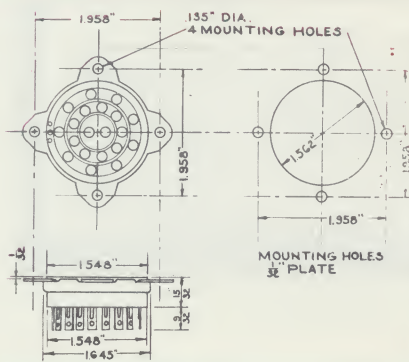
HOUSING MOUNTING: Tapered notches on sides provide for easy crimping of housing over base. Housing can also be screwed to drilled and tapped side holes.

PINS: Pins are nickel plated brass with open ends for fast, efficient "dip" soldering of leads.

CHART FOR RECOMMENDED STANDARD PIN LAYOUT

No. of Pins	Part No.	Pin Positions Used	No. of Pins	Part No.	Pin Positions Used
20	100Q-20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	100Q-20-15	- 2 - - 5 6 7 - - 10 11 12 13 14 15 16 17 18 19 20
19	100Q-20-19	1 - 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	100Q-20-151	- 2 3 - 5 6 7 - - 11 12 13 14 15 16 17 18 19 20
18	100Q-20-18	1 2 - 4 5 6 - 8 9 10 11 12 13 14 15 16 17 18 19 20	15	100Q-20-152	- 2 - 4 5 6 7 8 - - 12 13 14 15 16 17 18 19 20
18	100Q-20-181	1 2 3 4 5 6 - 8 9 10 - 12 13 14 15 16 17 18 19 20	15	100Q-20-153	1 2 - 4 5 6 7 - - - 12 13 14 15 16 17 18 19 20
17	100Q-20-17	- 2 3 - 5 6 7 8 9 10 - 12 13 14 15 16 17 18 19 20	15	100Q-20-154	- 2 - 4 5 6 7 - 9 - - 12 13 14 15 16 17 18 19 20
17	100Q-20-171	1 2 - 4 - 6 7 - 9 10 11 12 13 14 15 16 17 18 19 20	14	100Q-20-14	- 2 3 4 - - - 8 9 - - 12 13 14 15 16 17 18 19 20
16	100Q-20-16	1 2 - 4 - 6 - 8 - 10 11 12 13 14 15 16 17 18 19 20	13	100Q-20-13	- 2 - 4 - - - 8 - - 11 12 13 14 15 16 17 18 19 20
16	100Q-20-161	1 2 - 4 - 6 - 8 9 - 11 12 13 14 15 16 17 18 19 20	12	100Q-20-12	1 - - 4 - - - 8 - - 12 13 14 15 16 17 18 19 20
16	100Q-20-162	1 2 - 4 5 6 - 8 - - 11 12 13 14 15 16 17 18 19 20	11	100Q-20-11	1 - 3 - - - - - - 12 13 14 15 16 17 18 19 20
16	100Q-20-163	1 2 - 4 5 - 7 8 - - 11 12 13 14 15 16 17 18 19 20			

For quantity runs other pin layouts can be specified.



ALDEN "20" CHASSIS MOUNTING NON-INTERCHANGEABLE SOCKET 400-20 SERIES

Here is the socket requiring a minimum of space in your chassis.

MATERIAL: Molded of general purpose phenolic. (Black mica filled phenolic or NA-AX100 available if specified.) Sturdy mounting bracket is cadmium plated steel.

MOUNTING: Eyelets or rivets to chassis using standard production methods.

CONTACTS: The clips are beryllium copper tin plated with a current carrying capacity of 17 amps.

COLOR CODE: Identification color code can be specified. The specified color or colors are painted within locating rings. The same color is added to mating unit for fast positive matching.

CLIP RETENTION FORCE: In the standard model 3 locking contacts in the clips give a clickaction on the base pins and a minimum pull-out force of 28 lbs. By adding to the number of locking contacts in the socket, added pull-out force can be obtained.

CHART FOR RECOMMENDED STANDARD CONTACT LAYOUT

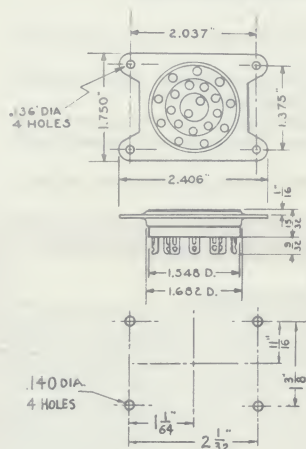
No. of Clips	Part No.	Clip Layout	No. of Clips	Part No.	Clip Layout
20	400-20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400-20-15	- 2 - - 5 6 7 - - 10 11 12 13 14 15 16 17 18 19 20
19	400-20-19	1 - 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400-20-151	- 2 3 - 5 6 7 - - 11 12 13 14 15 16 17 18 19 20
18	400-20-18	1 2 - 4 5 6 - 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400-20-152	- 2 - 4 5 6 7 8 - - 12 13 14 15 16 17 18 19 20
18	400-20-181	1 2 3 4 5 6 - 8 9 10 - 12 13 14 15 16 17 18 19 20	15	400-20-153	1 2 - 4 5 6 7 - - - 12 13 14 15 16 17 18 19 20
17	400-20-17	- 2 3 - 5 6 7 8 9 10 - 12 13 14 15 16 17 18 19 20	15	400-20-154	- 2 - 4 5 6 7 - 9 - - 12 13 14 15 16 17 18 19 20
17	400-20-171	1 2 - 4 - 6 7 - 9 10 11 12 13 14 15 16 17 18 19 20	14	400-20-14	- 2 3 4 - - - 8 9 - - 12 13 14 15 16 17 18 19 20
16	400-20-16	1 2 - 4 - 6 - 8 - 10 11 12 13 14 15 16 17 18 19 20	13	400-20-13	- 2 - 4 - - - 8 - - 11 12 13 14 15 16 17 18 19 20
16	400-20-161	1 2 - 4 - 6 - 8 9 - 11 12 13 14 15 16 17 18 19 20	12	400-20-12	1 - - 4 - - - 8 - - 12 13 14 15 16 17 18 19 20
16	400-20-162	1 2 - 4 5 6 - 8 - - 11 12 13 14 15 16 17 18 19 20	11	400-20-11	1 - 3 - - - - - 12 13 14 15 16 17 18 19 20
16	400-20-163	1 2 - 4 5 - 7 8 - - 11 12 13 14 15 16 17 18 19 20			

For quantity runs other clip layouts can be specified.

ALDEN PRODUCTS COMPANY

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PI

SPECIFICATIONS



ALDEN "20" RACK MOUNTING NON-INTERCHANGEABLE SOCKET 400LG-20 SERIES

Designed to fit side-by-side or in series with overlapping ears, 50 of these compact sockets will mount on a 10-1/2" x 19" rack mounting panel having six 3/8" U-Channels.

MATERIAL: Molded of general purpose phenolic. (Black mica filled phenolic or NA-AX100 available if specified.) Sturdy mounting bracket is cadmium plated steel.

MOUNTING: Eyelets or rivets to chassis using standard production methods.

CONTACTS: The clips are beryllium copper tin plated with a current carrying capacity of 17 amps.

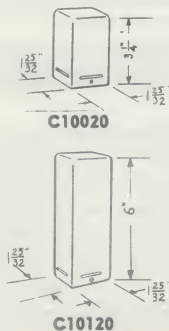
COLOR CODE: Identification color code can be specified. The specified color or colors are painted within locating rings. The same color is added to mating unit for fast positive matching.

CLIP RETENTION FORCE: In the standard model 3 locking contacts in the clips give a click action on the base pins and a minimum pull-out force of 28 lbs. By adding to the number of locking contacts in the socket, added pull-out force can be obtained.

CHART FOR RECOMMENDED STANDARD CONTACT LAYOUT

No. of Clips	Part No.	Clip Layout	No. of Clips	Part No.	Clip Layout
20	400LG-20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400LG-20-15	2 - - 5 6 7 - - 10 11 12 13 14 15 16 17 18 19 20
19	400LG-20-19	1 - 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400LG-20-151	2 3 - 5 6 7 - - 11 12 13 14 15 16 17 18 19 20
18	400LG-20-18	1 2 - 4 5 6 - 8 9 10 11 12 13 14 15 16 17 18 19 20	15	400LG-20-152	2 - 4 5 6 7 8 - - 12 13 14 15 16 17 18 19 20
18	400LG-20-181	1 2 3 4 5 6 - 8 9 10 - 12 13 14 15 16 17 18 19 20	15	400LG-20-153	1 2 - 4 5 6 7 - - - 12 13 14 15 16 17 18 19 20
17	400LG-20-17	2 3 - 5 6 7 8 9 10 - 12 13 14 15 16 17 18 19 20	15	400LG-20-154	2 - 4 5 6 7 - 9 - - 12 13 14 15 16 17 18 19 20
17	400LG-20-171	1 2 - 4 - 6 7 - 9 10 11 12 13 14 15 16 17 18 19 20	14	400LG-20-14	2 3 4 - - - 8 9 - - 12 13 14 15 16 17 18 19 20
16	400LG-20-16	1 2 - 4 - 6 - 8 - 10 11 12 13 14 15 16 17 18 19 20	13	400LG-20-13	2 - 4 - - - 8 - - 11 12 13 14 15 16 17 18 19 20
16	400LG-20-161	1 2 - 4 - 6 - 8 9 - 11 12 13 14 15 16 17 18 19 20	12	400LG-20-12	1 - - 4 - - - 8 - - 12 13 14 15 16 17 18 19 20
16	400LG-20-162	1 2 - 4 5 6 - 8 - - 11 12 13 14 15 16 17 18 19 20	11	400LG-20-11	1 - 3 - - - - - 12 13 14 15 16 17 18 19 20
16	400LG-20-163	1 2 - 4 5 - 7 8 - - 11 12 13 14 15 16 17 18 19 20			

For quantity runs other clip layouts can be specified.



HOUSINGS

Here are housings to dress up and shield the plug-in kits. These housings are seamless aluminum and can easily be crimped over the base or screwed on with 4/40 screws.

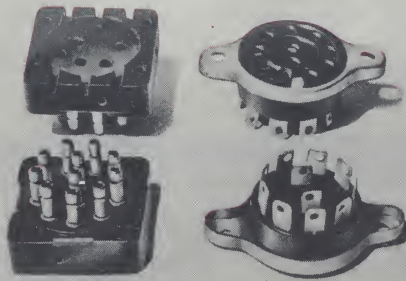
For variations see the Alden "20" Plug-in Packages. Page 5C Section PI.

ALDEN "11" NON-INTERCHANGEABLE BASES & SOCKETS

100/400-11 SERIES

These Alden plug-in bases are designed for variable pin patterns to insure that only the correct unit mates in its socket--to allow isolation of pins with critical voltages or current. Strong, stubby pins eliminate the bent pins and broken bosses of conventional octal or loctal bases.

Wherever you want a light rugged 11 pin base that will guard your expensive equipment against short circuit blowouts caused by misconnection, specify the Alden "11" Non-Interchangeable Series.



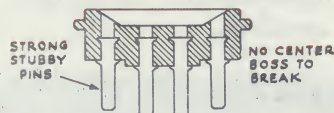
DESIGN FEATURES



VARIABLE PIN PATTERN INSURES ONLY CORRECT UNIT MATES IN SOCKET

Non-Interchangeable

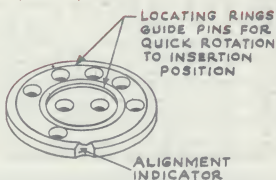
By using less than 11 pins, the pin pattern can be varied to isolate critical voltages or frequencies or to make unit non-interchangeable with any unit having same number of pins.



SLIGHT PROJECTION OF PINS CENTERS UNIT QUICKLY FOR LOCATING.

Rugged

Strong, stubby pins and no center boss to break out, gives the Alden "11" Bases special durability and long life.

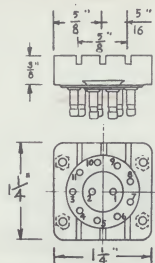


Easy Locating

Slight projection of pins quickly centers base in socket for locating....locating rings and alignment indicator guide pins for rotation to insertion. Color coding of rings available for fast identification.

ALDEN PRODUCTS COMPANY **8A**
PI

SPECIFICATIONS

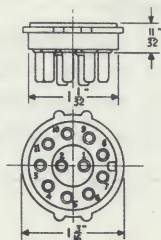


100Q 2/11 SERIES

High top base with 3 slots for holding terminal cards. Housing crimps or screws to base. Click action pins allows you to select variable retention force between base and socket. Molded of general purpose phenolic. (Black mica filled phenolic - NA-AX100 available as specified).

CHART FOR RECOMMENDED STANDARD PIN LAYOUT

No. of Pins	Part No.	Pin Positions Used	No. of Pins	Part No.	Pin Positions Used
11	100Q-11	1 2 3 4 5 6 7 8 9 10 11	6	100Q-61	- 2 3 - 5 6 7 - - - 11
10	100Q-10	1 - 3 4 5 6 7 8 9 10 11	6	100Q-62	- 2 - 4 5 6 7 8 - - -
9	100Q-9	1 2 - 4 5 6 - 8 9 10 11	6	100Q-63	1 2 - 4 5 6 7 - - -
9	100Q-91	1 2 3 4 5 6 - 8 9 10 -	6	100Q-64	- 2 - 4 5 6 7 - 9 - -
8	100Q-8	- 2 3 - 5 6 7 8 9 10 -	6	100Q-65	1 - 3 4 5 - - - 10 11
8	100Q-81	1 2 - 4 - 6 7 - 9 10 11	5	100Q-5	- 2 3 4 - - - 8 9 - -
7	100Q-7	1 2 - 4 - 6 - 8 - 10 11	4	100Q-4	- 2 - 4 - - - 8 - - 11
7	100Q-71	1 2 - 4 - 6 - 8 9 - 11	4	100Q-41	1 - 3 4 - - - - - 11
7	100Q-72	1 2 - 4 5 6 - 8 - - 11	3	100Q-3	1 - - 4 - - - 8 - - -
7	100Q-73	1 2 - 4 5 - 7 8 - - 11	2	100Q-2	1 - 3 - - - - - - -
6	100Q-6	- 2 - - 5 6 7 - - 10 11	For quantity runs other pin layouts can be specified.		

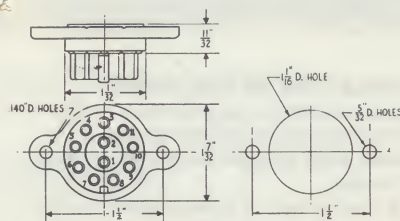


100 2/11 SERIES

Round plug-in base with 3/64" concentric, molded ridge and polarized ear for mounting by spinning can or crimping. Molded of general purpose phenolic. (Black mica filled phenolic - NA-AX100 available as specified).

CHART FOR RECOMMENDED STANDARD PIN LAYOUT

No. of Pins	Part No.	Pin Positions Used	No. of Pins	Part No.	Pin Positions Used
11	100-11	1 2 3 4 5 6 7 8 9 10 11	6	100-61	- 2 3 - 5 6 7 - - - 11
10	100-10	1 - 3 4 5 6 7 8 9 10 11	6	100-62	- 2 - 4 5 6 7 8 - - -
9	100-9	1 2 - 4 5 6 - 8 9 10 11	6	100-63	1 2 - 4 5 6 7 - - -
9	100-91	1 2 3 4 5 6 - 8 9 10 -	6	100-64	- 2 - 4 5 6 7 - 9 - -
8	100-8	- 2 3 - 5 6 7 8 9 10 -	6	100-65	1 - 3 4 5 - - - 10 11
8	100-81	1 2 - 4 - 6 7 - 9 10 11	5	100-5	- 2 3 4 - - - 8 9 - -
7	100-7	1 2 - 4 - 6 - 8 - 10 11	4	100-4	- 2 - 4 - - - 8 - - 11
7	100-71	1 2 - 4 - 6 - 8 9 - 11	4	100-41	1 - 3 4 - - - - - 11
7	100-72	1 2 - 4 5 6 - 8 - - 11	3	100-3	1 - - 4 - - - 8 - - -
7	100-73	1 2 - 4 5 - 7 8 - - 11	2	100-2	1 - 3 - - - - - - -
6	100-6	- 2 - - 5 6 7 - - 10 11	For quantity runs other pin layouts can be specified.		

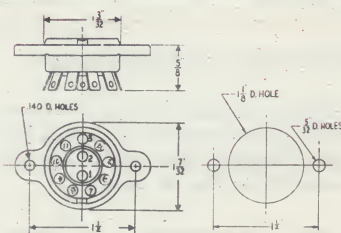


100 2/11P SERIES

Round Alden Non-Interchangeable Base with sturdy mounting plate. Eyelets or rivets to chassis or frame with standard production tools. Molded of general purpose phenolic. (Black mica filled phenolic - NA-AX100 available as specified).

CHART FOR RECOMMENDED STANDARD PIN LAYOUT

No. of Pins	Part No.	Pin Positions Used	No. of Pins	Part No.	Pin Positions Used
11	100-11P	1 2 3 4 5 6 7 8 9 10 11	6	100-61P	- 2 3 - 5 6 7 - - - 11
10	100-10P	1 - 3 4 5 6 7 8 9 10 11	6	100-62P	- 2 - 4 5 6 7 8 - - -
9	100-9P	1 2 - 4 5 6 - 8 9 10 11	6	100-63P	1 2 - 4 5 6 7 - - -
9	100-91P	1 2 3 4 5 6 - 8 9 10 -	6	100-64P	- 2 - 4 5 6 7 - 9 - -
8	100-8P	- 2 3 - 5 6 7 8 9 10 -	6	100-65P	1 - 3 4 5 - - - 10 11
8	100-81P	1 2 - 4 - 6 7 - 9 10 11	5	100-5P	- 2 3 4 - - - 8 9 - -
7	100-7P	1 2 - 4 - 6 - 8 - 10 11	4	100-4P	- 2 - 4 - - - 8 - - 11
7	100-71P	1 2 - 4 - 6 - 8 9 - 11	4	100-41P	1 - 3 4 - - - - - 11
7	100-72P	1 2 - 4 5 6 - 8 - - 11	3	100-3P	1 - - 4 - - - 8 - - -
7	100-73P	1 2 - 4 5 - 7 8 - - 11	2	100-2P	1 - 3 - - - - - - -
6	100-6P	- 2 - - 5 6 7 - - 10 11	For quantity runs other pin layouts can be specified.		



400 2/11 SERIES

Alden Non-Interchangeable Socket. Rivets or eyelets to chassis by regular production methods. Molded of general purpose phenolic. (Black mica filled phenolic - NA-AX100 available as specified).

CHART FOR RECOMMENDED STANDARD CONTACT LAYOUT

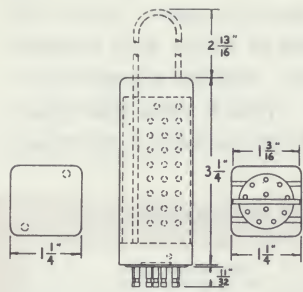
No. of Contacts	Part No.	Contact Positions Used	No. of Contacts	Part No.	Contact Positions Used
11	400-11	1 2 3 4 5 6 7 8 9 10 11	6	400-61	- 2 3 - 5 6 7 - - - 11
10	400-10	1 - 3 4 5 6 7 8 9 10 11	6	400-62	- 2 - 4 5 6 7 8 - - -
9	400-9	1 2 - 4 5 6 - 8 9 10 11	6	400-63	1 2 - 4 5 6 7 - - -
9	400-91	1 2 3 4 5 6 - 8 9 10 -	6	400-64	- 2 - 4 5 6 7 - 9 - -
8	400-8	- 2 3 - 5 6 7 8 9 10 -	6	400-65	1 - 3 4 5 - - - 10 11
8	400-81	1 2 - 4 - 6 7 - 9 10 11	5	400-5	- 2 3 4 - - - 8 9 - -
7	400-7	1 2 - 4 - 6 - 8 - 10 11	4	400-4	- 2 - 4 - - - 8 - - 11
7	400-71	1 2 - 4 - 6 - 8 9 - 11	4	400-41	1 - 3 4 - - - - - 11
7	400-72	1 2 - 4 5 6 - 8 - - 11	3	400-3	1 - - 4 - - - 8 - - -
7	400-73	1 2 - 4 5 - 7 8 - - 11	2	400-2	1 - 3 - - - - - - -
6	400-6	- 2 - - 5 6 7 - - 10 11	For quantity runs other contact layouts can be specified.		

10,011Q-1TC SINGLE CARD NO TUBE SOCKET

Standard package has (1) terminal card, (12) unstaked miniature terminals #652T, (1) Alden 11 pin Non-Interchangeable base 100Q 2/11 Series in the pin layout you specify (see Page 8B, Sect. PI), (1) housing.

Add "H" to part number for bail. If staked terminals are desired, add "A", and indicate on the Unit Planning Sheet both type of terminal and the hole pattern in which they are to be staked. See Page 1C, Sect. PI for instructions.

Specify the Alden "11" Non-Interchangeable socket separately, it is not part of the package. Ordering information will be found on Page 8B, Sect. PI.

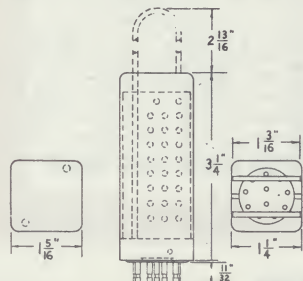


10,011Q-2TC DOUBLE CARD NO TUBE SOCKET

Standard package has (2) terminal cards, (19) unstaked miniature terminals #652T, (1) Alden 11 pin Non-Interchangeable base 100Q 2/11 Series in the pin layout you specify (see Page 8B, Sect. PI), (1) housing.

Add "H" for bail. If staked terminals are desired, add "A", and indicate on the Unit Planning Sheet both type of terminal and the hole pattern in which they are to be staked.

Specify the Alden "11" Non-Interchangeable socket separately, it is not part of the package. Ordering information will be found on Page 8B, Sect. PI.

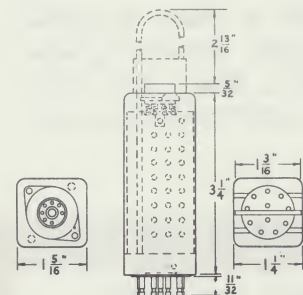


10,011Q-1T-7C MINIATURE 7 PIN TUBE SOCKET SINGLE CARD

Standard package has (1) terminal card, (12) unstaked miniature terminals #652T, (1) 7 pin miniature tube socket, (1) Alden 11 pin Non-Interchangeable base 100Q 2/11 Series in the pin layout you specify (see Page 8B, Sect. PI), (1) housing.

Add "S" to part number for tube shield base riveted to top of can. Add "H" for bail. If staked terminals are desired, add "A", and indicate on the Unit Planning Sheet both type of terminal and the hole pattern in which they are to be staked.

Specify the Alden "11" Non-Interchangeable socket separately, it is not part of the package. Ordering information will be found on Page 8B, Sect. PI.

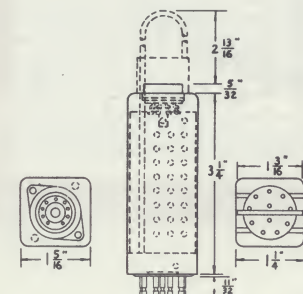


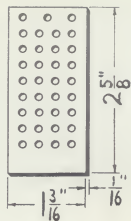
10,011Q-1T-9C MINIATURE 9 PIN TUBE SOCKET ON SINGLE CARD

Standard package has (1) terminal card, (12) unstaked miniature terminals #652T, (1) 9 pin miniature tube socket, (1) Alden 11 pin Non-Interchangeable base 100Q 2/11 Series in the pin layout you specify (see Page 8B, Sect. PI), (1) housing.

Add "S" to part number for tube shield base riveted to top of can. Add "H" for bail. If staked terminals are desired, add "A", and indicate on the Unit Planning Sheet both type of terminal and the hole pattern in which they are to be staked.

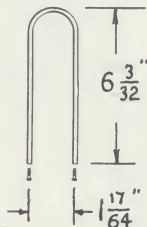
Specify the Alden "11" Non-Interchangeable socket separately, it is not part of the package. Ordering information will be found on Page 8B, Sect. PI.





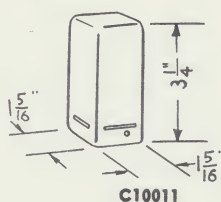
TERMINAL MOUNTING CARD
650-11-1 for Alden "11" Type Plug-in Packages

XXP natural phenolic - $1 \frac{3}{16}$ " x $2 \frac{5}{8}$ " with 35 .101" diameter holes on $\frac{1}{4}$ " centers. Secures to base with mounting brackets BR-5 or molded card boss.



BAIL
H 10011-2A

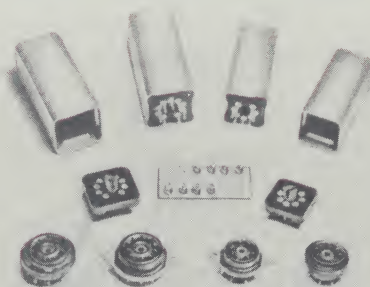
Complete with 2 screws



HOUSING
C 10011

To completely shield and protect plug-in kits, good-looking seamless aluminum housings are available. They are easily attached either by crimping over the base, or by #2-56 screws.

Miniature and sub-miniature circuits, potted circuits, and miniaturized components can easily be made compact, sturdy plug-in units with the Alden 7 and 9 Pin Series Miniature Plug-in Bases and Sockets. Your circuits, wired using the Alden Terminal Card Mounting System mounted on the miniature bases become complete miniature assemblies....fit into production assembly methods, completely shielded where necessary, and easily replaceable for repairs. Potted circuit assemblies bond firmly to Alden miniature bases giving exact pin layout with a minimum of fussing.

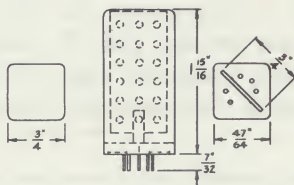


ALDEN MIN PLUG-IN PACKAGES

10,007Q-1TC SINGLE CARD NO TUBE SOCKET

Standard package has (1) terminal card #650-7-1, (8) unstaked miniature terminals #652T, (1) Alden miniature 7 pin base 907MIBQ-1.

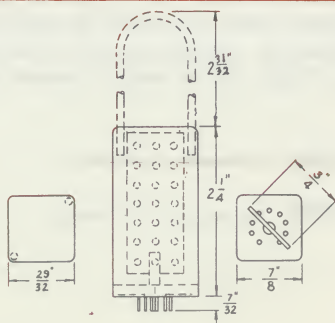
If staked terminals are desired, add "A" to part number and indicate on the Unit Planning Sheet the type of terminal and hole pattern in which they are to be staked.



10,009Q-1TC SINGLE CARD NO TUBE SOCKET

Standard package has (1) terminal card #650-9-1, (8) unstaked miniature terminals #652T, (1) Alden miniature 9 pin base 909MIBQ-1, (1) housing.

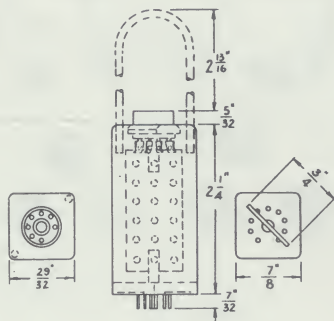
Add "H" to part number for bail. If staked terminals are desired, add "A" to part number and indicate on the Unit Planning Sheet the type of terminal and hole pattern in which they are to be staked.



ALDEN PRODUCTS COMPANY **9A**
PI

SPECIFICATIONS

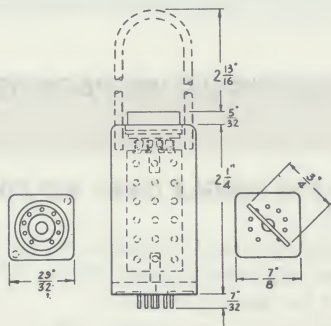
10,009Q-1T-7C MINIATURE 7 PIN SOCKET ON SINGLE CARD



Standard package has (1) terminal card #650-7-1, (8) unstaked miniature terminals #652T, (1) 7 pin miniature socket, (1) Alden 9 pin miniature base 909MIBQ-1, (1) housing.

Add "H" to part number for bail. If staked terminals are desired, add "A", and indicate on Unit Planning Sheet the type of terminal and hole pattern in which they are to be staked.

10,009Q-1T-9C MINIATURE 9 PIN SOCKET ON SINGLE CARD

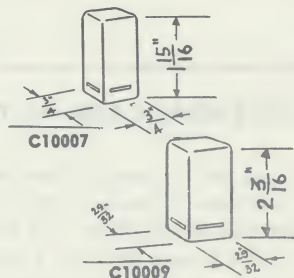


Standard package has (1) terminal card #650-7-1, (8) unstaked miniature terminals #652T, (1) 9 pin miniature socket, (1) Alden 9 pin miniature base 909MIBQ-1, (1) housing.

Add "H" to part number for bail. If staked terminals are desired, add "A", and indicate on Unit Planning Sheet the type of terminal and hole pattern in which they are to be staked.

HOUSINGS

To completely shield and protect the small plug-in units, substantial, seamless aluminum housings are available. They can be easily crimped over the base.



C 10007 for square 7 pin bases.

C 10009 for square 9 pin bases.

SPECIFICATIONS

TERMINAL MOUNTING CARDS



650-7-1

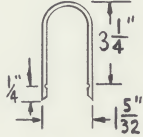


650-9-1

XXP natural phenolic with .101" diameter holes on 1/4" centers. Card mounts on molded boss or brass stud of bases.

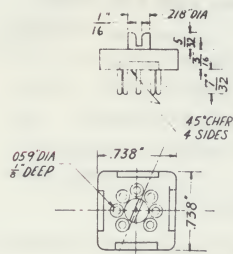
Use card #650-7-1 for 7 pin plug-in packages or 9 pin type with tube socket in top. Measures 1-19/32" x 3/4", has 18 terminal holes.

Use card #650-9-1 for 9 pin plug-in packages without tube socket in top. Measures 1-27/32" x 3/4", has 21 terminal holes.



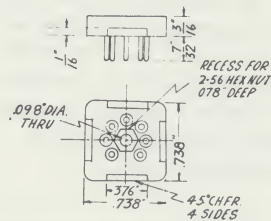
BAIL

For "9" type plug-in packages only.



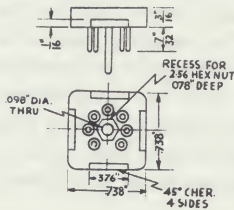
907MIBQ Min. 7 Pin Sq. Base with Card Mtg. Boss

A standard miniature 7 pin layout in a square base. Center boss for easy mounting of Alden Terminal Card. 3/4" square can mounts by crimping aluminum over four indentations on molding. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.



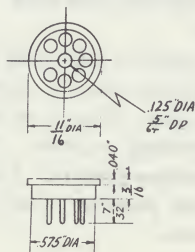
907MIBQ-1 Min. 7 Pin Sq. Base with Center Hole

A standard miniature 7 pin layout in a square base with .098" diameter center hole for stud or screw and hexagonal nut for mounting units to base. 3/4" square housing mounts by crimping aluminum over four indentations on molding. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.



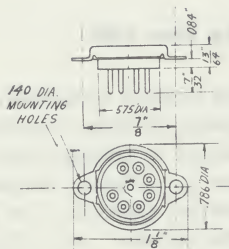
907MIBQ-2 Min. 7 Pin Sq. Base with Center Locating Pin

Here is standard Alden miniature 7 pin with easy locating center pin for guiding base for rotation to insertion position into socket. Also, if needed, the extra pin can carry high voltage or current. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.



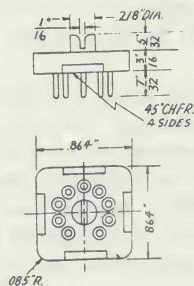
907MIB Min. 7 Pin Round Base

Alden standard miniature 7 pin layout in a round base. Ideal for potted circuits. Housing crimped or spun over 1/16" molded ridge. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass. Center hole for mounting stud can be supplied when specified.



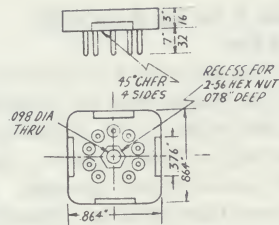
907P Min. 7 Pin Round Base with Mtg. Plate

Alden standard miniature 7 pin base with metal mounting plate. Rivets or eyelets to your plug-in units with regular production assembly tools. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass. Metal mounting plate of cadmium plated cold rolled steel.



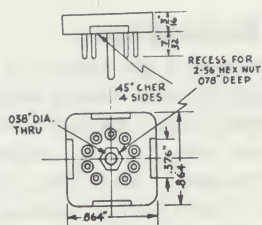
909 MIBQ Min. 9 Pin Sq. Base with Card Mtg. Boss

A standard miniature 9 pin layout in a square base with center boss for easy mounting of Alden Terminal Card. 7/8" square can mount easily by crimping aluminum over four indentations on molding. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.



909 MIBQ-1 Min. 9 Pin Sq. Base with Center Hole

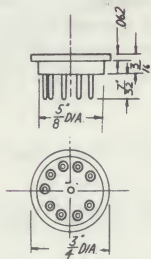
Alden standard miniature 9 pin layout in a square base with a .098" diameter center hole for stud or screw and hexagonal nut for mounting units to base. 7/8" square can mount with regular production tools by crimping aluminum over four indentations on molding. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.



909 MIBQ-2 Min. 9 Pin Sq. Base with Center Locating Pin

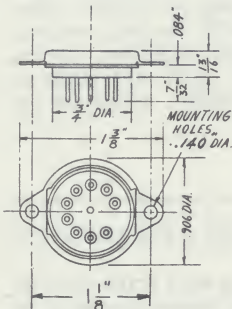
Here is standard Alden miniature 9 pin with easy locating center pin for guiding base for rotation to insertion position into socket. Also, if needed, the extra pin can carry high voltage or current. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.

909 MIB Min. 9 Pin Round Base



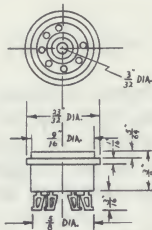
Alden standard miniature 9 pin layout in a round base. Ideal for potted circuits. Housing crimped or spun over 1/16" molded ridge. Center hole for mounting stud can be supplied when specified. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass.

909P Min. 9 Pin Round Base with Mtg. Plate



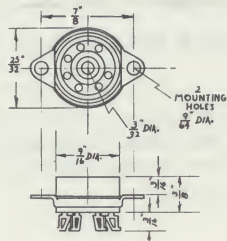
Alden standard miniature 9 pin base with metal mounting plate. Rivets or eyelets to your plug-in units with regular production assembly tools. Standard base molded in general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Pins are silver plated brass. Metal mounting plate of cadmium plated cold rolled steel.

407 Min. 7 Pin Socket

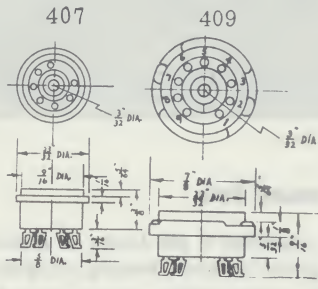


Standard Alden miniature 7 pin socket designed for button mounting.....takes absolute minimum of space. Rugged clips with floating action retain their life over thousands of insertions. Accessible solder terminals for easy soldering. Standard socket molded of general purpose phenolic. Also available in black mica filled phenolic or NA-AX100. Clips are tin plated beryllium copper.

407P Min. 7 Pin Socket with Mtg. Plate

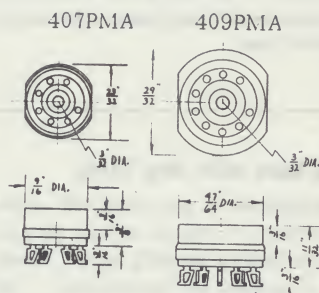


Standard miniature 7 pin socket with metal mounting plate. Mounts from beneath surface -- has high top for mounting through thick surfaces. Rivets or eyelets to chassis using standard assembly tools. Rugged clips with floating action insure easy insertion and good retention. Accessible solder terminals for easy soldering. Standard socket molded of general purpose phenolic. Also available in black mica filled phenolic or NA-AX100. Clips are tin plated beryllium copper.



MIN. 7 AND 9 PIN SOCKET

Standard Alden miniature socket designed for button mounting...takes absolute minimum of space. Rugged clips with floating action retain their life over thousands of insertions. Accessible solder terminals for easy soldering. Standard socket molded of general purpose phenolic. Also available in black mica filled phenolic or NA-AX100. Clips are tin plated beryllium copper.



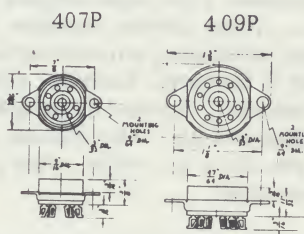
MIN. 7 AND 9 PIN SOCKET WITH HIGH TOP MOLDING

Standard Alden miniature sockets with high top molding. Ideal for mounting in plug-in units, using mounting stud. Rugged clips with floating action. Accessible solder terminals for easy soldering. Molded of general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Clips are tin plated beryllium copper.

407MIN. 409MIN

MIN. HIGH TOP LOW COST 7 AND 9 PIN SOCKETS

Simple 1 piece phenolic molding with stake-in type contacts of tinned brass for use where economy is needed.



MIN. 7 AND 9 PIN SOCKET WITH MTG. PLATE

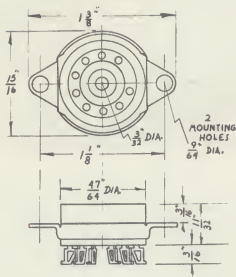
Standard miniature socket with metal mounting plate. Mounts from beneath surface--has high top for mounting through thick surfaces. Rivets or eyelets to chassis using standard assembly tools. Rugged clips with floating action insure easy insertion and good retention. Accessible solder terminals for easy soldering. Standard socket molded of general purpose phenolic. Also available in black mica filled phenolic or NA-AX100. Clips are tin plated beryllium copper.

407MINP 409MINP

MINIATURE LOW COST 7 AND 9 PIN SOCKETS WITH MOUNTING PLATE

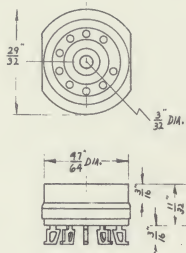
1 piece phenolic molding with stake-in type contacts of tinned brass. Mounts from beneath surface with rivets or eyelets. This is our economy version of the 407P and 409P socket shown above.

SPECIFICATIONS



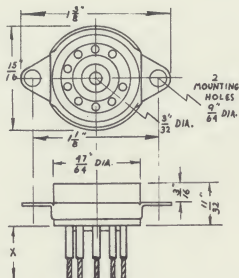
409 P Min. 9 Pin Socket with Mtg. Plate

Standard miniature 9 pin socket with metal mounting plate. Rivets or eyelets to chassis using standard production assembly tools. Rugged clips with floating action insure easy insertion and good retention. Accessible solder terminals for easy soldering. Standard socket molded of general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Clips are tin plated beryllium copper.



409PMA Min. 9 Pin Socket with High Top Molding

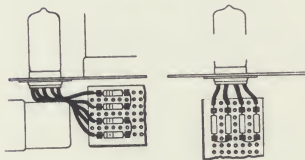
Standard Alden miniature 9 pin socket with high top molding. Ideal for mounting in plug-in units, using mounting stud. Rugged clips with floating action. Accessible solder terminals for easy soldering. Molded of general purpose phenolic. Also available in black mica filled phenolic NA-AX100. Clips are tin plated beryllium copper.



409 PC Min. 9 Pin Chassis Mounting Pigtail Socket

Speeds wiring of chassis mounted sockets to terminal cards or other circuit components by providing leads. Contacts are tin plated beryllium copper.

Leads -- available tailored to your specs, but for lowest cost specify Standard #APW 906-22S, #22 solid tinned, 4" long, tinned 3/8". Specify "X". Molding is general purpose black phenolic -- also available in black mica-filled phenolic Alden NA-AX-100.



ALDEN PRODUCTS COMPANY

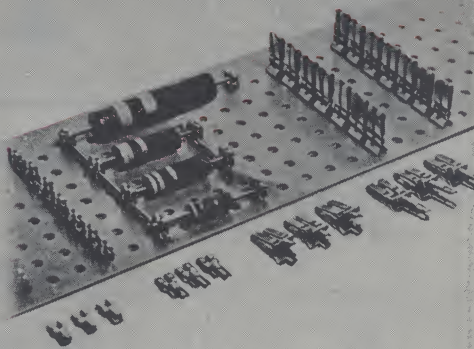
9H
PI

650 SERIES

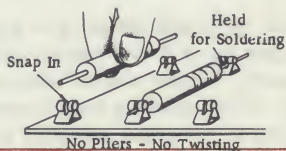
Here are miniature solder terminals based on an entirely new design principle that really put soldering on a production basis.

The unique punch press configuration holds component leads for soldering without necessity of twisting with pliers. Saves Time--Components snap in. Saves Material--only a minimum of soldering necessary. Saves Space--heat is dissipated quickly in terminal; therefore permits use of short space conserving leads.

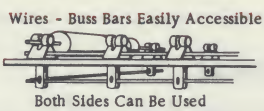
Developed on a Navy miniaturization contract to speed production and save space, these new terminals make it possible to secure multiple leads with a minimum of effort, and, at the same time, obtain a finished product that is neat, compact and easily accessible for test or removal.



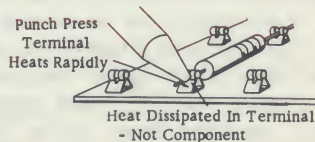
DESIGN FEATURES



Components Snap or Push Into Alden terminal and are held for soldering. Leads don't have to be twisted and wrapped with pliers. Puts soldering on a production basis.



Buss Bars and Cross Wires Solder with Ease
On the feed-through types, both sides of terminal can be used to keep complicated assemblies from becoming a maze.



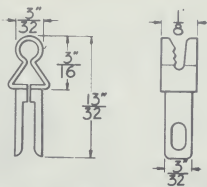
Alden Terminals are Punch Press Parts
Come to soldering temperature rapidly. Heat is quickly dissipated in terminal and not in component--permits use of short space saving leads with less danger of heat damaging components.



Wide Range of Component Wire Sizes can be accommodated. Terminals eyelet to mounting board, space components away from mounting board and hold them solidly for soldering.

ALDEN PRODUCTS COMPANY

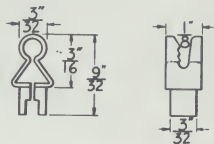
10A
PI



651T MIN. DOUBLE END FEED THROUGH



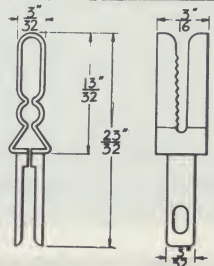
Takes leads up to and including 18 gage. Recommended for 1/4 and 1/2 watt resistors. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



652T MIN. SINGLE END



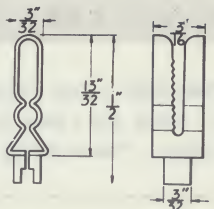
Takes leads up to and including 18 gage. Recommended for 1/4 and 1/2 watt resistors. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



653T DOUBLE END RATCHET ACTION FEED THROUGH



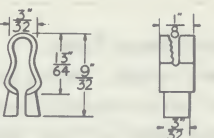
Takes leads up to and including 18 gage. Will accommodate up to 2 watt resistor without depressing leads. Ratchet action holds component from mounting board. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



654T SINGLE END RATCHET ACTION



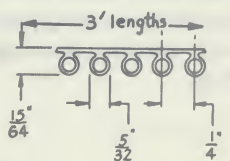
Takes leads up to and including 18 gage. Will accommodate up to 2 watt resistor without depressing leads. Ratchet action holds component from mounting board. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



652DT DIODE TERMINAL



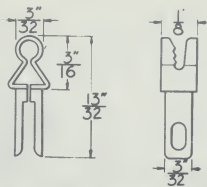
Here is a miniature terminal for mounting diodes and other components with small wire leads #22-#25 AWG. Leads merely snap in, are held securely by ratchet action. Can be soldered if required--terminal takes solder fast and dissipates heat rapidly. Material is electro-tinned brass. Mounting hole .101" (#38 drill) in 1/16" board. To mount, use Alden Diode Staking Tool #TLRS11-1.



650J TERMINAL JUMPER STRIP



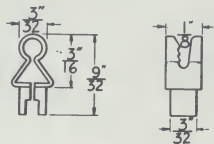
This tinned brass jumper eliminates wiring between Alden Miniature Terminals. Makes common connections when staked in under miniature terminal. Furnished in 3 ft. strips. Specify quantity.



651T MIN. DOUBLE END FEED THROUGH



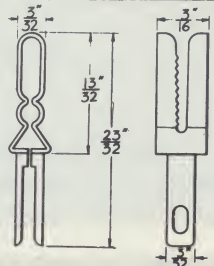
Takes leads up to and including 18 gage. Recommended for 1/4 and 1/2 watt resistors. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



652T MIN. SINGLE END



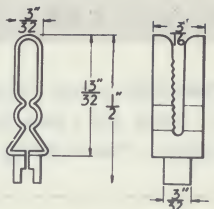
Takes leads up to and including 18 gage. Recommended for 1/4 and 1/2 watt resistors. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



653T DOUBLE END RATCHET ACTION FEED THROUGH



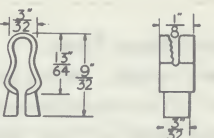
Takes leads up to and including 18 gage. Will accommodate up to 2 watt resistor without depressing leads. Ratchet action holds component from mounting board. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



654T SINGLE END RATCHET ACTION



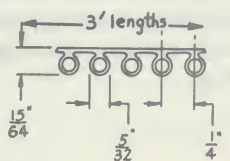
Takes leads up to and including 18 gage. Will accommodate up to 2 watt resistor without depressing leads. Ratchet action holds component from mounting board. 1/16" mounting board recommended. Material is tin plated brass. Terminal mounting hole .101" or #38 drill.



652DT DIODE TERMINAL



Here is a miniature terminal for mounting diodes and other components with small wire leads #22-#25 AWG. Leads merely snap in, are held securely by ratchet action. Can be soldered if required--terminal takes solder fast and dissipates heat rapidly. Material is electro-tinned brass. Mounting hole .101" (#38 drill) in 1/16" board. To mount, use Alden Diode Staking Tool #TLRS11-1.



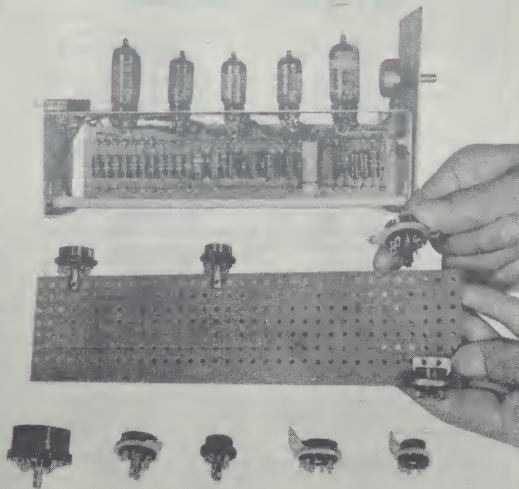
650J TERMINAL JUMPER STRIP



This tinned brass jumper eliminates wiring between Alden Miniature Terminals. Makes common connections when staked in under miniature terminal. Furnished in 3 ft. strips. Specify quantity.

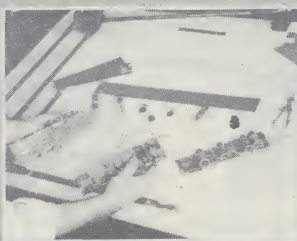
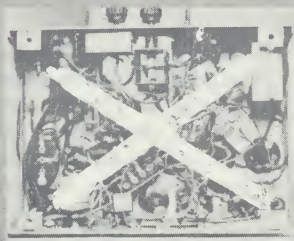
ALDEN TERMINAL CARD MOUNTING SOCKETS

Now, for the first time with Alden Card Mounting Sockets you can integrate your circuitry in the same plane as your tubes, plug-ins and other top chassis components. These sockets mount directly to your terminal cards to provide a compact single plane of circuitry that snap, plug, or bracket mounts--replacing point to point chassis wiring with efficient, unit sub-assembly methods and giving you circuits organized function by function that mount in orderly parallel planes -- that take a very minimum of space, yet provide unblocked air flow paths for efficient heat dissipation --and give easy accessibility for quick checks and servicing.



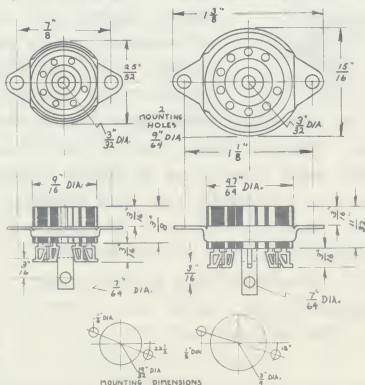
TERMINAL CARD MOUNTING SOCKETS ALLOW YOU TO:

Eliminate point to point chassis wiring Make your circuiting complete unit sub-assemblies Package as compact vertical planes

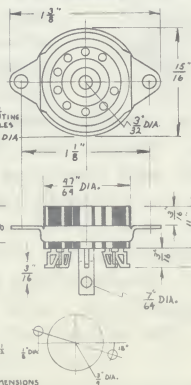


MINIATURE SOCKETS

407SPA
(for 7 pin min.)



409SPA
(for 9 pin min.)

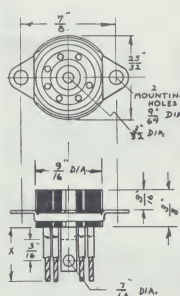


Alden Piggy Back Sockets For Min. Tubes

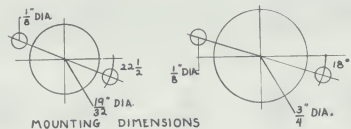
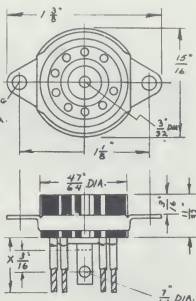


With Alden "piggy backs" your sub-chassis layout becomes a sub-assembly with your tube sockets an integral part of your terminal card circuitry which is carried "piggy back" beneath your chassis. Each socket has a split tubular center shield with legs that simply straddle and eyelet to the edge of your terminal card. Your complete assembly is held "piggy back" by the socket saddle eyeleted to your chassis. Standard is black phenolic--also available in Plaskon Alkyd. Clips are tinned beryllium copper. Eyelet furnished. Stud takes 1/16" card.

407SPAC (for 7 pin min.)



409SPAC (for 9 pin min.)

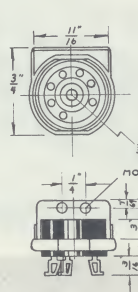


Alden Piggy Back Pigtail Sockets For Min. Tubes

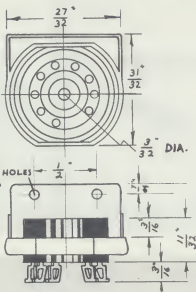


Here are Alden "pigtail piggy backs" with leads. Makes your sub-chassis layout a simple sub-assembly with your tube sockets an integral part of your terminal card circuitry which is carried "piggy back" beneath your chassis. Prepared leads can be one-shot soldered to terminal card connections or dropped into printed wiring holes for fast dip-soldering. Each socket has leads and a split tubular center shield with legs that simply straddle and eyelet to the edge of your terminal card. Your complete assembly is held "piggy back" by the socket saddle eyeleted to your chassis. Standard is black phenolic--also available in Plaskon Alkyd. Leads are APW906-22S, #22 solid, 1/64" wall of polyvinyl, "X" length 4", dipped 3/8"; also available with leads to your specs. Clips are tinned beryllium copper. Eyelet furnished. Stud takes 1/16" card.

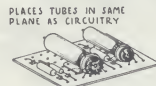
407BMA (for 7 pin min.)



409BMA (for 9 pin min.)

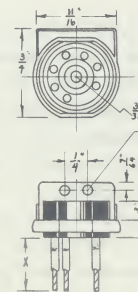


Alden Side Saddle Sockets For Min. Tubes

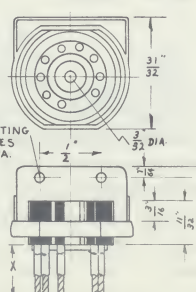


Now you can orientate your tubes parallel to chassis, panel, terminal or printed circuit boards by using Alden "side saddle" sockets that mount at right angles to these surfaces. Each socket has a right angle mounting plate that simply eyelets to mounting surface, eliminating need for punching socket holes. Standard is black phenolic; also available in Plaskon Alkyd. Clips are tinned beryllium copper. Eyelet furnished.

407BMAC (for 7 pin min.)



409BMAC (for 9 pin min.)



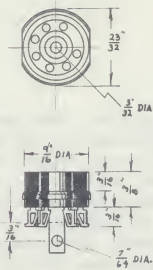
Alden Side Saddle Pigtail Sockets For Min. Tubes



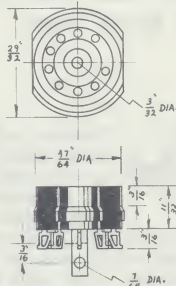
Alden "pigtail side saddles" are mounted at right angles to chassis, panel, terminal, or printed circuit boards to save space by mounting tubes in same plane as mounting surface. Prepared leads are one-shot soldered to terminal card connections or simply dropped into printed wiring holes for fast float soldering. Each socket has leads and a right angle mounting plate that simply eyelets to any surface. Standard is black phenolic; also available in Plaskon Alkyd. Leads are APW906-22S, #22 solid, 1/64" polyvinyl wall, "X" length 4", dipped 3/8". Also available with leads to your specs. Clips are tinned beryllium copper. Eyelet furnished.

12 D
PI

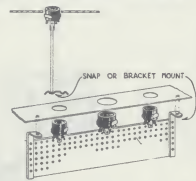
407SMA
(for 7 pin min.)



409SMA
(for 9 pin min.)



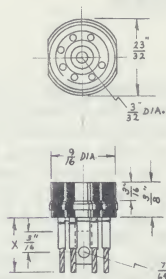
Alden Bare Back Sockets For Min. Tubes



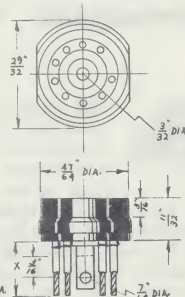
Complete unit sub-assemblies are easy with Alden "bare backs" that mount directly to edge of your terminal card. Completed assemblies then bracket or snap-mount as compact units into protective chassis or housings.

Each socket has a split tubular center shield with legs that simply straddle and eyelet to the edge of your terminal card. Socket position is maintained by inserting into socket holes in protective housing. Standard is black phenolic; also available in Plaskon Alkyd. Clips are tinned beryllium copper. Eyelet furnished. Stud takes 1/16" card.

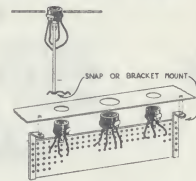
407SMAC
(for 7 pin min.)



409SMAC
(for 9 pin min.)



Alden Bare Back Pigtail Sockets For Min. Tubes



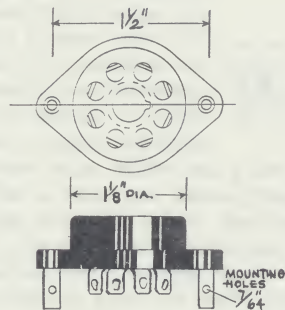
Here are Alden "pigtail bare backs" that simplify terminal card sub-assembly construction and speed wiring. Socket mounts to edge of terminal card and leads are "one shot" soldered to terminals or dropped

into printed wiring holes for fast dipsoldering. Completed assemblies bracket or snap-mount as compact units into protective housings or chassis--with tube sockets positioned by inserting into housing socket holes. Each socket has leads and a split tubular center shield with legs that simply straddle and eyelet to edge of your terminal card. Standard is black phenolic; also available in Plaskon Alkyd. Leads are APW906-22S, #22 solid, 1/64" polyvinyl wall, "X" length 4", dipped 3/8". Also available to customer's specs. Clips are tinned beryllium copper. Eyelet furnished. Stud takes 1/16" card.

STANDARD SOCKETS

408SA

Alden Bare Back Sockets For Octal Tubes



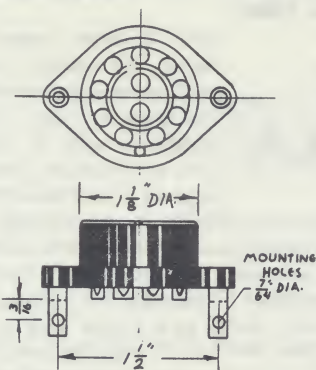
SNAP OR
BRACKET
MOUNT



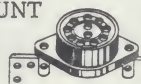
These octal sockets have split studs which eyelet directly to your terminal card to make it an integral unit with its associated circuitry. Socket mounts up through single hole in chassis--can be held in place by bracket or "snap-in" mounting of its terminal card. Each socket has 2 split tubular studs with legs that simply straddle and eyelet to edge of your terminal card. Standard is black phenolic; also available in Plaskon Alkyd. Contacts are resilient, triangular shaped, tinned brass. Eyelets furnished. Studs take 1/16" card.

400-11SMA

Alden Bare Back 11 Pin Non- Interchangeable Socket



SNAP OR
BRACKET
MOUNT



Use with bases and plugs on Alden Handbook pages 8A/PI-8E/PI, as a receptacle for plug-in units or cable connections to your terminal cards. Each socket has two split mounting studs with legs that simply straddle and eyelet to the edge of your terminal card. Standard is black phenolic--also available in Plaskon Alkyd. Clips are tinned beryllium copper. Eyelets furnished. Studs take 1/16" card. Available in volume with non-interchangeable contact layouts listed below.

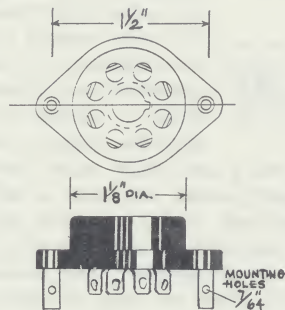
CHART FOR RECOMMENDED STANDARD CONTACT LAYOUT

No. of Contacts	Part No.	Contact Positions Used	No. of Contacts	Part No.	Contact Positions Used
11	400-11SMA	1 2 3 4 5 6 7 8 9 10 11	6	400-61SMA	- 2 3 - 5 6 7 - - 11
10	400-10 "	1 - 3 4 5 6 7 8 9 10 11	6	400-62 "	- 2 - 4 5 6 7 8 - -
9	400-9 "	1 2 - 4 5 6 - 8 9 10 11	6	400-63 "	1 2 - 4 5 6 7 - - -
9	400-91 "	1 2 3 4 5 6 - 8 9 10 -	6	400-64 "	- 2 - 4 5 6 7 - 9 -
8	400-8 "	- 2 3 - 5 6 7 8 9 10 -	6	400-65 "	1 - 3 4 5 - - - 10 11
8	400-81 "	1 2 - 4 - 6 7 - 9 10 11	5	400-5 "	- 2 3 4 - - - 8 9 -
7	400-7 "	1 2 - 4 - 6 - 8 - 10 11	4	400-4 "	- 2 - 4 - - - 8 - 11
7	400-71 "	1 2 - 4 - 6 - 8 9 - 11	4	400-41 "	1 - 3 4 - - - - 11
7	400-72 "	1 2 - 4 5 6 - 8 - - 11	3	400-3 "	1 - 4 - - - 8 - -
7	400-73 "	1 2 - 4 5 - 7 8 - - 11	2	400-2 "	1 - 3 - - - - -
6	400-6 "	- 2 - - 5 6 7 - - 10 11	For quantity runs other contact layouts can be specified.		

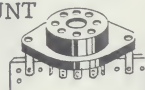
STANDARD SOCKETS

408SA

Alden Bare Back Sockets For Octal Tubes



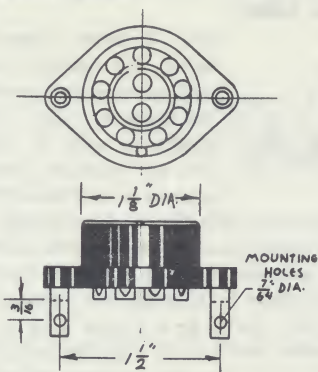
SNAP OR
BRACKET
MOUNT



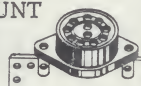
These octal sockets have split studs which eyelet directly to your terminal card to make it an integral unit with its associated circuitry. Socket mounts up through single hole in chassis--can be held in place by bracket or "snap-in" mounting of its terminal card. Each socket has 2 split tubular studs with legs that simply straddle and eyelet to edge of your terminal card. Standard is black phenolic; also available in Plaskon Alkyd. Contacts are resilient, triangular shaped, tinned brass. Eyelets furnished. Studs take 1/16" card.

400-11SMA

Alden Bare Back 11 Pin Non- Interchangeable Socket



SNAP OR
BRACKET
MOUNT



Use with bases and plugs on Alden Handbook pages 8A/PI-8E/PI, as a receptacle for plug-in units or cable connections to your terminal cards. Each socket has two split mounting studs with legs that simply straddle and eyelet to the edge of your terminal card. Standard is black phenolic--also available in Plaskon Alkyd. Clips are tinned beryllium copper. Eyelets furnished. Studs take 1/16" card. Available in volume with non-interchangeable contact layouts listed below.

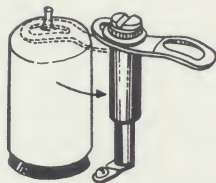
CHART FOR RECOMMENDED STANDARD CONTACT LAYOUT

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10	400-10 "	1 - 3 4 5 6 7 8 9 10 11	6	400-62 "	- 2 - 4 5 6 7 8 - -
9	400-9 "	1 2 - 4 5 6 - 8 9 10 11	6	400-63 "	1 2 - 4 5 6 7 - - -
9	400-91 "	1 2 3 4 5 6 - 8 9 10 -	6	400-64 "	- 2 - 4 5 6 7 - 9 -
8	400-8 "	- 2 3 - 5 6 7 8 9 10 -	6	400-65 "	1 - 3 4 5 - - - 10 11
8	400-81 "	1 2 - 4 - 6 7 - 9 10 11	5	400-5 "	- 2 3 4 - - - 8 9 -
7	400-7 "	1 2 - 4 - 6 - 8 - 10 11	4	400-4 "	- 2 - 4 - - - 8 - 11
7	400-71 "	1 2 - 4 - 6 - 8 9 - 11	4	400-41 "	1 - 3 4 - - - - 11
7	400-72 "	1 2 - 4 5 6 - 8 - - 11	3	400-3 "	1 - - 4 - - - 8 - -
7	400-73 "	1 2 - 4 5 - 7 8 - - 11	2	400-2 "	1 - 3 - - - - - -
6	400-6 "	- 2 - - 5 6 7 - - 10 11	For quantity runs other contact layouts can be specified.		

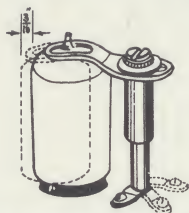
ALDEN TUBE CLAMPS

320 Series Tube Clamps for 7 and 9 Pin Miniature Glass Receiving & Transmitting Tubes.

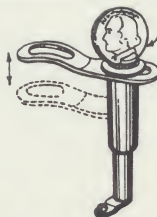
Developed as a more reliable means of protecting tubes, mounted on replacement chassis, during transit--it has also proved to be far more flexible than previous designs. This completely engineered component is spring loaded to allow for variations in tube height and to assure proper tension at all times--no danger of broken or damaged tubes from undue pressure under shock.



Tube may be removed without removing tube clamp. Simply lift up cap and swing out of the way.



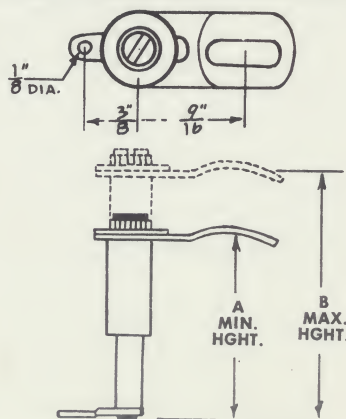
Slotted holes in cap and swivel base eliminate need for critical location of clamp. Cap has $\frac{3}{16}$ " travel in either direction.



Cap has $\frac{3}{16}$ " travel up or down. Alden target screw with knurled concave head permits easy adjustment by hand, coin or screw driver.

Simple one hole mounting with eyelet or screw takes minimum of space...

PART NUMBERS	APPLICATIONS	DIM. A	DIM. B
320-MIN-6	for $1\frac{1}{8}$ high tubes	1"	$1\frac{3}{8}$ "
320-MIN-9	for $1\frac{1}{2}$ high tubes	$1\frac{3}{8}$ "	$1\frac{3}{4}$ "
320-MIN-13	for 2" high tubes	$1\frac{7}{8}$ "	$2\frac{1}{4}$ "



SPECIFICATIONS

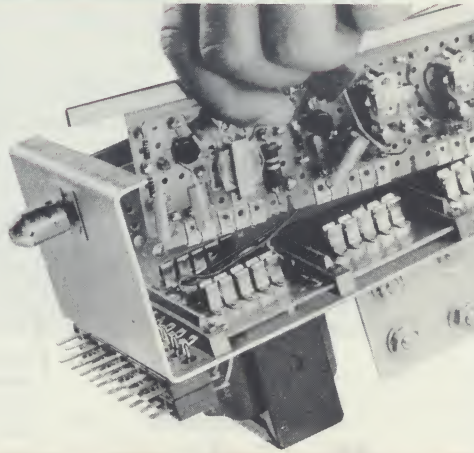
Clamp Cap is stainless steel spring tempered for added resiliency. Sleeve is cadmium plated brass--Stud and base cadmium plated cold rolled steel. Alden S.S. Target Screw with wide slot uses knurled concave head.

ALDEN PRODUCTS COMPANY BROCKTON MASS.

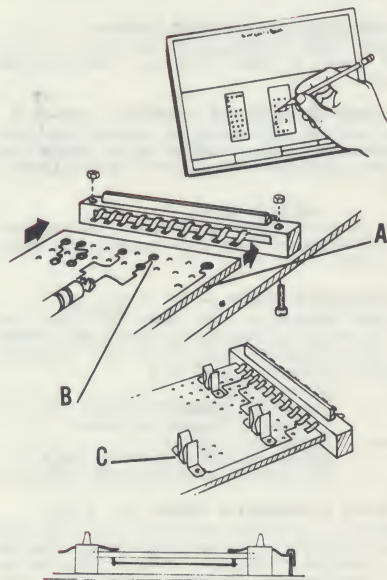
9/57

12G
PI

This unique method of mounting terminal card modules in Alden Basic Chassis permits solderless interconnections and true plug-in/snap-out circuit planes. Crossover connector blocks mount to underside of chassis and hold circuit cards which carry all interconnections between terminal cards and chassis-mounted components to a single point for input/output at back connections. Circuits may be printed, etched, conventionally wired or combinations of each for maximum flexibility in all phases of design and manufacture. The Alden Crossover System in Alden Basic Chassis provide the optimum in fast, easy assembly rapid servicing and easy maintenance.



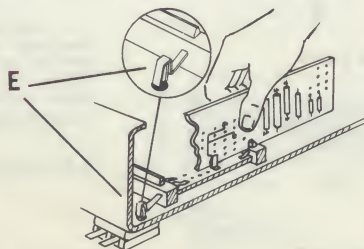
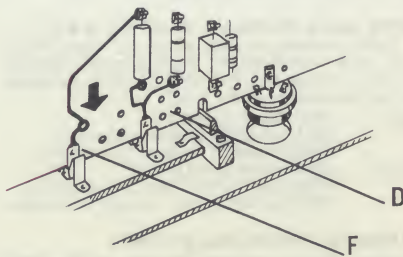
HOW THE ALDEN CROSSOVER SYSTEM WORKS

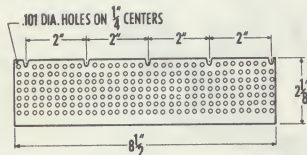
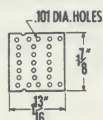
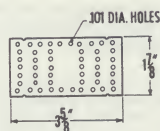
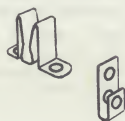
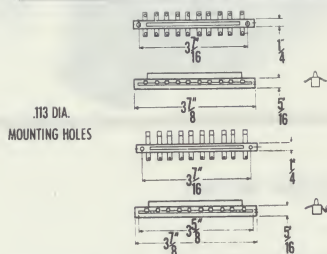
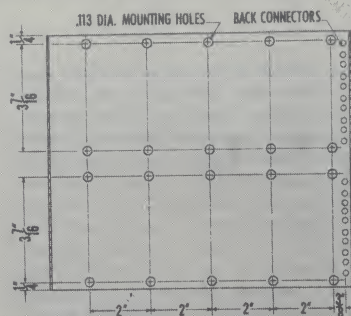


1. Simply layout your terminal card and crossover card circuitry on Alden full-scale planning sheets.
2. Use either printed circuit or conventional wiring techniques . . . for crossover cards (A) use eyelets to terminate circuits at crossover blocks (B) and include crossover connectors (C) as required to bring connections from terminal cards (D).
3. Punch or drill holes in chassis as required for crossover blocks and tube sockets. Fasten rear crossover block to chassis and snap onto back connector terminals (E).
4. Insert crossover card into slot of next crossover block and then into block already fastened to chassis. Continue in this manner until all cards and blocks are mounted.
5. Mount terminal card components and eyelet crossover contacts (F) to terminate circuits at plug-in points for crossover connections.

NOTE: Crossover cards are necessary only as needed to carry required interconnections between terminal cards and back connectors. You can wire directly from crossover block terminals to any chassis or front panel mounted component. Half-size crossover cards may be used to provide clearance for tube sockets.

Once the vertical card modules are in position, a track is snapped into place to hold them securely and makes the card extremely rigid.





Track for holding vertical mounted terminal cards firmly in position. Alden Chassis are provided with mounting clips.

ALDEN TERMINAL MOUNTING CARDS

Pat. Pending

Now with standard Alden Terminal Mounting Cards you can have tremendous flexibility for laying out and wiring an infinite number of circuit variations.

These rugged terminal cards come with pre-punched grids (25 holes per square inch) into which the Alden 650 Series Miniature Terminals easily stake. Both sides of the card can be used so it is easy to select optimum terminal pattern for the most efficient circuit wiring.



SPECIFICATIONS

* 650ATMS Terminal Cards in Varied Lengths



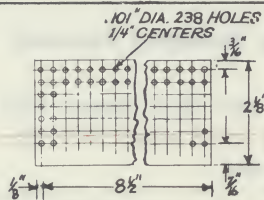
Here are terminal card strips you can order to any length up to 3 feet. .101" diameter holes are pre-punched in 7 rows on 1/4" centers in the XXP natural phenolic. These cards have wide flexibility and many uses.

* 650ATMS-1 for Mounting in Chassis



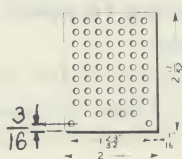
XXP natural phenolic - 2-1/8" x 8-1/2" with 238 holes .101" pre-punched in 7 rows on 1/4" centers. This card can be secured to the chassis with Hold Down Track, mounting plate, sockets or brackets.

* 650ATMS-1-SS1



Boards silk screened front and back with the vertical holes, lettered A-G and the horizontal holes numbered 1-34. Establishes accurate location of components for assembly and servicing.

* 650-20-1 for Single Card Alden "20" Type Plug-in Packages



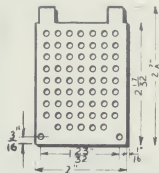
XXP natural phenolic - 2 x 2-17/32" with 61 holes .101" diameter pre-punched in 9 rows on 1/4" centers. This card can be secured with mounting brackets or molded card boss on Alden "20" Socket.

*For glass epoxy add G10 after part numbers.

ALDEN PRODUCTS COMPANY

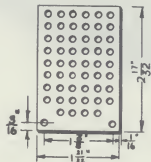
**12A
PI**

650-20-3 for Single Card-Single Tube Socket Alden "20" Type Open Plug-in Packages



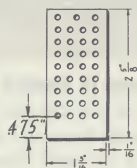
The ears fit in slots on top row of kit and hold card rigidly. XXP natural phenolic 2 x 2-7/8" with 61 holes .101" diameter pre-punched in 9 rows on 1/4" centers. This card can be secured with mounting brackets or molded card boss on Alden "20" socket.

650-20-2 for Double Card Alden "20" Type Plug-in Packages

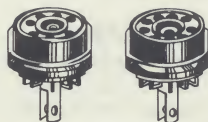


XXP natural phenolic - 1-21/32" x 2-17/32" with 52 holes .101" diameter pre-punched in 9 rows on 1/4" centers. This card can be secured with mounting brackets or molded card boss on Alden "20" Socket.

650-11-1 for Alden "11" Type Plug-in Packages

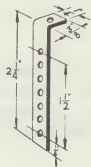


XXP natural phenolic - 1-3/16" x 2-5/8" with 35 holes .101" diameter on 1/4" centers. This card can be secured with mounting brackets or molded card boss on Alden "11" Socket.



407/9 SMA Series 7 and 9 Pin Tube Sockets with Mounting Stud

These miniature tube sockets are complete with studs and eyelets for easy mounting on terminal cards.



BR-10 Bracket for Mounting Terminal Card in Chassis

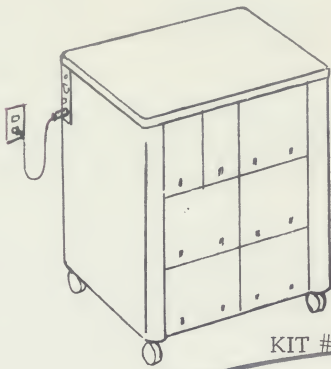
Right angle bracket with #6-32 tapped hole for screwing into chassis and 8 holes .101" dia. for fastening terminal board.



BR-5 Bracket for Mounting Terminal Card on Alden "20" Base

Right angle bracket with 2 holes .136" dia. for mounting terminal card to Alden "20" Base.

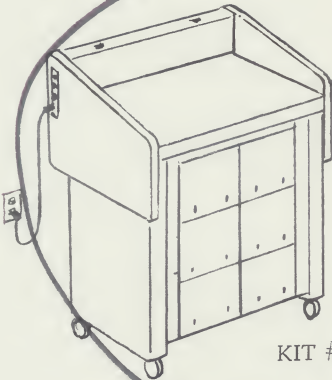
**COMPLETE KITS TO MOUNT, HOUSE, FASTEN, CONNECT & MONITOR
ELECTRONIC CIRCUITRY**



KIT #47

**UNDERBENCH UNIT FOR ELECTRONIC
MEASURING AND CONTROL**

Solves problems of circuit packaging, operation and servicing under benches like the Alden Work Center for a standardized approach to work simplification and automation. Simply roll into place and plug-in for immediate operation. All interconnecting leads are neatly enclosed within the ALDEN INTERCHASSIS CONNECTING SYSTEM to provide shielding and protection from contamination. Back Connectors bring all inputs/outputs and interchassis connections to POINT OF CHECK for simplified maintainability. Alden slide-in chassis hold downtime to 30 seconds replacement of malfunction.



KIT #48

**ROLL-IN ELECTRONICS CENTER FOR
ON-THE-SPOT USE**

Solves problem of finding top space for test and measuring instruments at point-of-use. With this self-contained, roll-in unit you can have modular interchangeable circuit functions below and readout or control elements on top. All the elements of the Alden Unit Construction System and the INTERCHASSIS CONNECTING SYSTEM help you package equipment at lowest cost to ship intact, roll to point-of-use and plug-in for immediate operation.



KIT #49

**HI-LEVEL ENCLOSURE FOR ELECTRONIC
SYSTEMS**

Solves problem of maintaining and servicing equipment from front. Eight levels of modular slide-in chassis with complete INTERCHASSIS CONNECTING SYSTEM gives flexibility for interchangeable electronic functions. Pre-engineered air flow with chimney effect eliminates need for side louvers which are ineffective when enclosures are placed side by side. Back Connectors provide a pictorial Point of Check for all pertinent circuit function and test data to cut malfunction tracing, testing and repairing as much as 50% even from front of equipment.

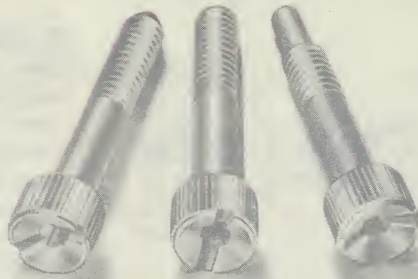
CAP-CAPTIVE CONVENIENCE SCREWS

4600 SERIES

Here's a real convenience screw for the modern designer. In production, the head makes a beautiful target for power tools - concave surface and arced notch quickly center the tool on screw for rapid tightening against lockwasher. In the field, no special tools are necessary - arced slot in head is of such proportion that even a coin gives sufficient leverage to back it off lockwasher.

In inaccessible spots - where screw drivers must be tilted to reach screw - the arced slot will compensate for tilt up to 30° . Can readily be made captive, so it's ideal for holding detachable mechanical units, plug-in housings, and miniature chassis. Can be standard construction wherever modern design principles of accessibility and convenience are paramount.

Pat. Pending



DESIGN FEATURES



EASILY LOOSENED

Designed to be easily loosened by any tool. Slot takes socket wrench, screw driver or coin - knurled head provides sure finger grip for easy turning of screw by hand.



LOCATES TOOL INSTANTLY

In inaccessible locations, concave head surface instantly locates tool into slot for turning. Arc slot centers screw driver, socket wrench or coin to give sufficient leverage to back screw off lockwasher.



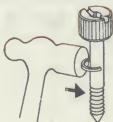
1

2

3

POINTS in THREE STYLES

- 1). Chamfered - for standard fastening, no screw projection. Can replace conventional cap screws.
- 2). Bullet nose - for guiding screw into tapped hole - quicker assembly - easier threading.
- 3). Pilot guide - for easy piloting and locating of plug-in units.



READILY MADE CAPTIVE

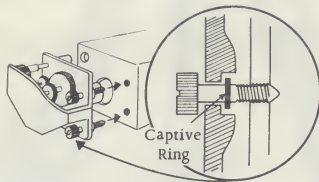
Screw can be readily made captive. Closed end captive rings slipped over end of screw to desired position. Open-end captive rings quickly driven across shank into position.

ALDEN PRODUCTS COMPANY

13A
PI

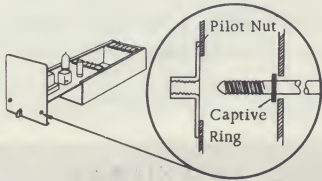
IN MECHANICAL UNITS

Alden Cap-Captives in mechanical units make sub-assemblies easily replaceable in the field. Here Alden screws - made captive to a gear unit - pilot the unit into main housing. Play of screws makes possible easy meshing of gears. With gears meshed, fingers rapidly turn screw to position for final tightening by coin, socket wrench or screw driver. This unit, then - with less life than that of the equipment - becomes easily replaceable.



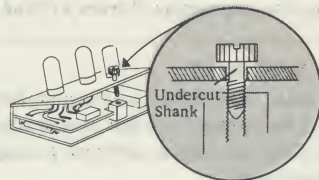
IN ELECTRONIC UNITS

Here's the Cap-Captive screw locking a small slide-in chassis. "Pilot guide" point instantly positions chassis in rack - brings back connectors in alignment. Knurled head provides sure finger grip for easily mating chassis and back connectors securely in rack. Ideal where chassis have conventional back connectors with high insertion force. Any tool - coin, socket wrench, screw driver - guides chassis and prongs smoothly and easily into engagement.



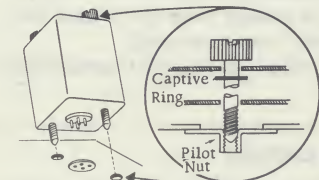
IN ELECTRICAL UNITS

Here the Alden Screw is captive to the ninged cover of a compact electrical unit. The screw holds the cover securely in place. When unit is serviced in the field - any coin, screw driver or socket wrench frees the screw. Captive - it can't be dropped or lost. Method of servicing becomes more obvious and maintenance easier for untrained operators in the field. (In quantities of 1,000 or more, screws can be supplied with an undercut shank as illustrated).

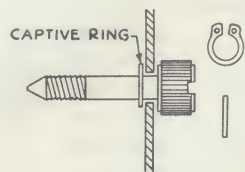


IN PLUG-IN UNITS

As an integral part of a plug-in unit, the two Cap-Captives instantly locate unit in mounting position. Unit is held securely against all vibration or shock - yet unit can be quickly and easily removed at any instant. Here's the construction you can use where units must be fastened securely - yet have shorter life than that of the equipment or must be interchangeable.

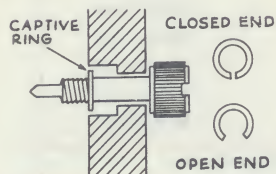


CAPTIVE RINGS



When screw is to be captive in sheet metal, the U-ring is recommended. To assemble - use pointed spring loaded pliers which open when squeezed. Ordinary pointed pliers may be used and the points ground to fit the rings. Insert ring on pliers, open ring, slip over end of screw into position and release ring.

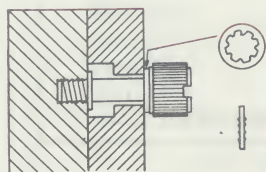
Alden Part No.	For Alden Cap Captive	Max. Ring Clearance	Ring Thickness
4602-1CR	10-32	.406	.035
4600-1CR	1/4-20	.468	.035



Where captive ring is to nest in a casting or where space is limited, a spring type captive ring should be used. To assemble - position captive ring over end of screw and push or turn ring to final position on shank. For supporting weights heavier than the screw itself, such as on electronic plug-in units, a groove may be cut in the shank to accept ring. Open type captive ring permits quick positioning by driving open ring across the screw shank.

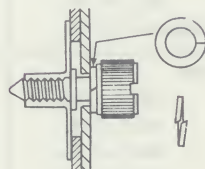
Closed End Part No.	Open End Part No.	For Alden Cap Captive	Ring Thickness	Suggested Groove Size	
4604-2CR	4604-3CR	6-32	.020	.024	.005
4603-2CR	4603-3CR	8-32	.020	.024	.005
4602-2CR	4602-3CR	10-32	.025	.029	.006
4600-2CR	4600-3CR	1/4-20	.031	.036	.008

LOCKWASHERS



Where protection against vibration and locking action are important, such as casting to casting assembly, the internal type lockwasher should be used. Stocked and supplied in carbon steel. Stainless steel available as specials.

Alden Part No.	For Alden Cap Captive	Max. O.D. of Washer	Washer Thickness
L6SI	6-32	.285	.018
L8SI	8-32	.336	.020
L10SI	10-32	.381	.022
L14SI	1/4-20	.478	.025



Where strong spring action is required, such as sheet metal to sheet metal assembly, the split type lockwasher is recommended. Stocked and supplied in carbon steel. Stainless steel washers available as specials.

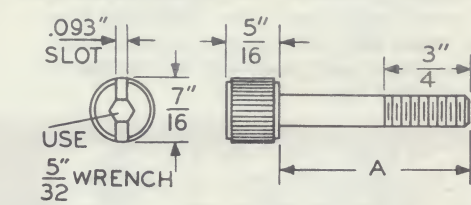
Alden Part No.	For Alden Cap Captive	Section Size
L6W	6-32	.047 x .031
L8W	8-32	.055 x .040
L10W	10-32	.062 x .047
L14W	1/4-20	.109 x .062

ALDEN PRODUCTS COMPANY

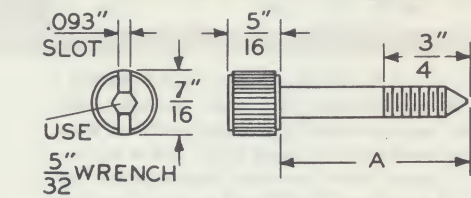
13C
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SPECIFICATIONS

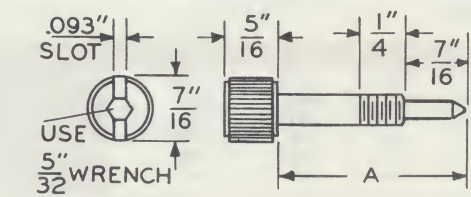
4600 SERIES 1/4"-20 NC-2



Dim. "A"	Part No.
Chamfered	
3/4"	4600-1-12
1"	4600-1-16
1-1/4"	4600-1-20
1-1/2"	4600-1-24
2"	4600-1-32
2-1/2"	4600-1-40

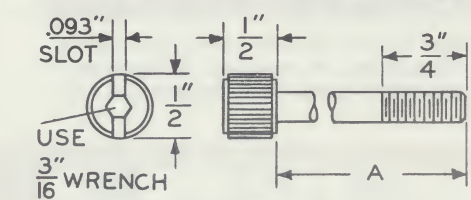


Dim. "A"	Part No.
Bullet Nose	
3/4"	4600-2-12
1"	4600-2-16
1-1/4"	4600-2-20
1-1/2"	4600-2-24
2"	4600-2-32
2-1/2"	4600-2-40

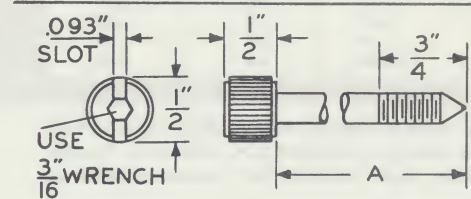


Dim. "A"	Part No.
Pilot Guide	
3/4"	4600-3-12
1"	4600-3-16
1-1/4"	4600-3-20
1-1/2"	4600-3-24
2"	4600-3-32
2-1/2"	4600-3-40
Minimum quantities of 1,000.	

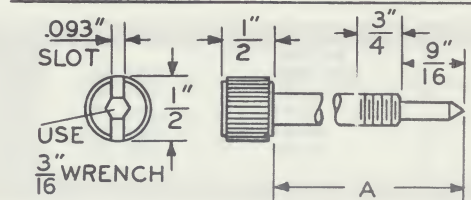
4601 SERIES 1/4"-20 NC-2 Extra Long



Dim. "A"	Part No.
Chamfered	
3"	4601-1-48
3-1/2"	4601-1-56
4"	4601-1-64
5"	4601-1-80
6"	4601-1-96
Minimum quantities of 1,000.	

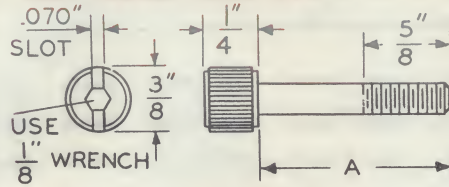


Dim. "A"	Part No.
Bullet Nose	
3"	4601-2-48
3-1/2"	4601-2-56
4"	4601-2-64
5"	4601-2-80
6"	4601-2-96
Minimum quantities of 1,000.	

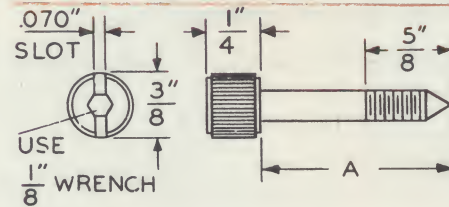


Dim. "A"	Part No.
Pilot Guide	
3"	4601-3-48
3-1/2"	4601-3-56
4"	4601-3-64
5"	4601-3-80
6"	4601-3-96
Minimum quantities of 1,000.	

4602 SERIES 10-32 NF-2

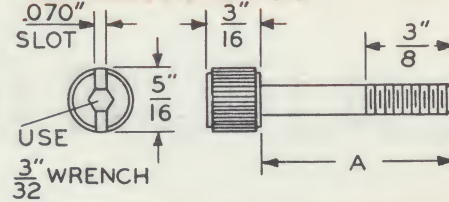


Dim. "A"	Part No.
Chamfered	
3/4"	4602-1-12
1"	4602-1-16
1-1/2"	4602-1-24
2"	4602-1-32
2-1/2"	4602-1-40

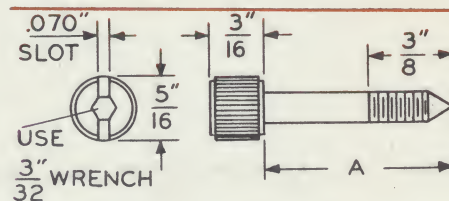


Bullet Nose	
3/4"	4602-2-12
1"	4602-2-16
1-1/2"	4602-2-24
2"	4602-2-32
2-1/2"	4602-2-40

4603 SERIES 8-32 NC-2

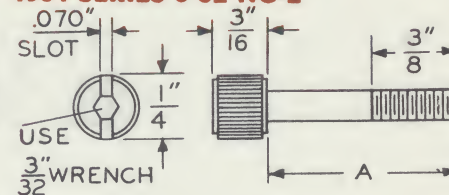


Dim. "A"	Part No.
Chamfered	
1/2"	4603-1-8
3/4"	4603-1-12
1"	4603-1-16
1-1/4"	4603-1-20
1-1/2"	4603-1-24

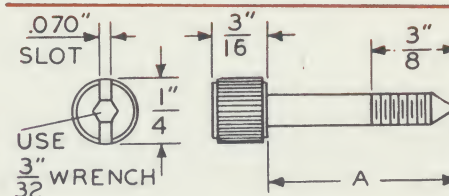


Bullet Nose	
1/2"	4603-2-8
3/4"	4603-2-12
1"	4603-2-16
1-1/4"	4603-2-20
1-1/2"	4603-2-24

4604 SERIES 6-32 NC-2



Dim. "A"	Part No.
Chamfered	
1/2"	4604-1-8
3/4"	4604-1-12
1"	4604-1-16
1-1/4"	4604-1-20
1-1/2"	4604-1-24



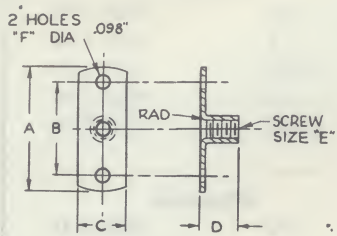
Bullet Nose	
1/2"	4604-2-8
3/4"	4604-2-12
1"	4604-2-16
1-1/4"	4604-2-20
1-1/2"	4604-2-24

Screws are cold rolled steel, cadmium plated.

ALDEN PRODUCTS COMPANY **13E**
PI

SPECIFICATIONS

ALDEN PILOT NUTS



Part No	A	B	C	D	E	F
4610-1	1-1/4"	15/16"	1/2"	13/32"	#1/4-20	.098"
4611-1	1-1/4"	15/16"	1/2"	3/8"	#10-32	.098"
4612-1	3/4"	19/32"	1/2"	1/4"	#8-32	.098"
4613-1	5/8"	7/16"	19/64"	1/4"	#6-32	.086"
TO MOUNT - Weld in position or fasten with screw or rivet.						

ALDEN TARGET SCREWS

4600 SERIES

Pat. Pending

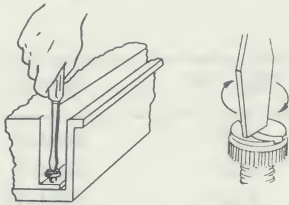
Alden Target Screws immediately center screw driver for fast production assembly. The concave head and arced slot prevent twisted and sheared edges so commonly found in crown type screws. In using the Alden Target Screws, pressure on the screw driver forces it to stay in the arced slot, and the built up edges give strength where it is needed. Finely made, the target screws dress up and give a finished look to all equipment. As a convenience feature, any coin up to and including a half dollar will give sufficient leverage to loosen and back off screw.



DESIGN FEATURES

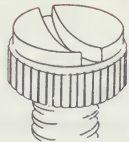
IDEAL SCREW FOR FAST PRODUCTION

For simple rapid assembly by power screw driver, concave surface of head instantly locates tool and depth of slot holds it securely. In inaccessible spots, concave head surface quickly locates tool in slot for turning.



STRONG AND DURABLE FOR LONG LIFE

Strength of the head is on the edges where needed... The high shoulders prevent twisting or shearing when pressure is applied.



NO SPECIAL TOOLS NECESSARY

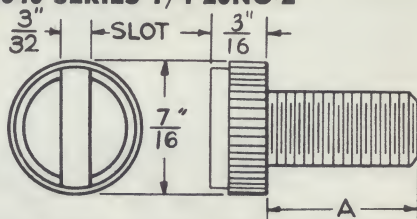
Designed to be loosened by screw driver or coin, slot takes coin and will give leverage to back screw off. Knurled head provides easy finger grip for turning.



ALDEN PRODUCTS COMPANY **14A**
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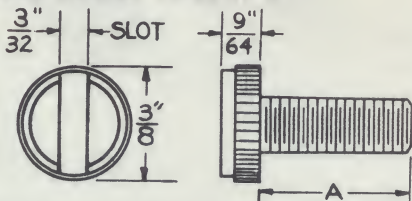
SPECIFICATIONS

4640 SERIES 1/4-20NC-2



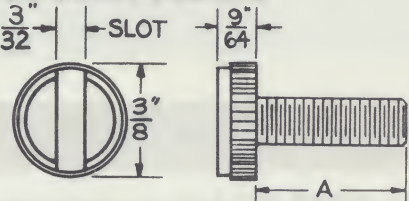
Dim. "A"	Part No.
3/8"	4640-6
1/2"	4640-8
3/4"	4640-12
1"	4640-16

4652 SERIES 10-32NF-2



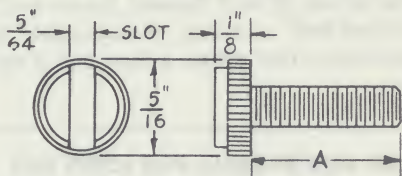
Dim. "A"	Part No.
3/8"	4652-6
1/2"	4652-8
3/4"	4652-12
1"	4652-16

4653 SERIES 8-32NC-2



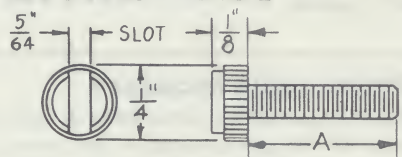
Dim. "A"	Part No.
3/8"	4653-6
1/2"	4653-8
3/4"	4653-12
1"	4653-16

4664 SERIES 6-32NC-2



Dim. "A"	Part No.
3/8"	4664-6
1/2"	4664-8
3/4"	4664-12
1"	4664-16

4665 SERIES 4-40NC-2



Dim. "A"	Part No.
3/8"	4665-6
1/2"	4665-8
3/4"	4665-12
1"	4665-16

Screws are Stainless Steel-type 303.